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| 10/621,082 | 07/16/2003 | Luis O. Tedeschi | 10845-147 | 7721 |
| 26486 | 7590 | 12/22/2005 | EXAMINER | |
| PERKINS, SMITH & COHEN LLP ONE BEACON STREET 30TH FLOOR BOSTON, MA 02108 | | | MILLER, MARINA I | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1631 | |

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|---------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/621,082 | TEDESCHI ET AL. |
| | Examiner Marina Miller | Art Unit 1631 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 October 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-27 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Applicants' submission filed on 10/14/2005 is acknowledged. Claims 1-27 are pending.

Claims 1-27 presently are under examination.

Applicants' arguments have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are applied.

Claim Rejections - 35 USC § 101

Non-Statutory Subject Matter

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The instant claims were rejected in the previous office action mailed 7/12/2005 because the claims do not recite a physical step, do not actually transform a set of data, and the claimed method does not produce a useful, concrete and tangible result.

Applicants amended claim 1 to recite "wherein said daily feed requirement ... is provided in order to allocate feed fed to ... animal in a pen." Applicants argue that the instant claims, as amended, are directed to statutory subject matter because there is an economical "need and it is useful to obtain a daily feed requirement in order to allocate feed fed to an individual animal." (p. 10 of applicants' answer). Applicants further state that "there is utility for a predicted feed requirement." (p. 11 of the answer). It seems that applicants argue the issue of utility, not statutory subject matter, which is a different requirement under 35 U.S.C. 101. The instant

claims were not rejected for lack of utility, but were rejected as being drawn to a non-statutory subject matter. Applicants are reminded that “usefulness” under utility and statutory subject matter requirements has different standards. Applicants’ arguments have been considered, but are found not persuasive.

As set forth in the previous office action, the claimed method does not comprise a physical step and does not actually transform data, but the method reiterates statistical/mathematical calculations. The method does not recite an actual (concrete) result in a form useful to one skilled in the art.

For the reasons stated above and in the previous office action, the rejection of claims 1-8 under 35 U.S.C. 101 is maintained.

Lack of Utility

Claims 9-10 and 16-17 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Claims were previously rejected for lack of patentable utility.

Applicants amended claims to recite “wherein said daily feed requirements and said daily weight gain … are provided … to allocate feed fed to the individual animal in a pen of animals.” Applicants argue that the instant claims, as amended, have patentable utility. Applicants’ arguments have been considered, but are found not persuasive.

Claims 9-10 and 16-17 are directed to a system and a computer readable medium, respectively, for executing steps of obtaining a daily feed requirement and a daily weight gain. A system for managing the individual animals MAY have a “substantial” utility, if one knew parameters and/or purpose of the managing (e.g., to allocate feed fed to an animal, as recited by

the amended claims). However, the specification does not disclose any specific utility for the invention because the claims do not recite a specific use of the system for managing animals. In order for the result of the method to be useful for managing animals, one of ordinary skill in the art must be aware of some correlation or prediction based on obtained data. Absent any disclosure about, for example, correlation of the obtained feed requirement and weight gain and managing animals or allocating fed feed, the asserted utility is not specific. No such information is recited in the instant claims. Asserted utility, *i.e.*, to allocate feed to an animal in a pen, constitutes general utility, and is not specific for the claimed invention. Also, it is noted that the preamble of the method recites a system for managing animals. Such an invention MAY have utility if the recited steps were actually directed to a method of managing. However, the method steps merely result in calculating feed requirement and weight gain. The amended claims recite the intended use of the system (*i.e.*, to allocate feed), which is not interpreted as an active, positive step of the method and, in fact, does not limit the claimed invention. There are no active, positive steps of managing animals recited in the instant claims, and therefore the purpose of the preamble is not accomplished. For the reasons set forth above and in the previous office action, the invention lacks a specific and substantial utility, and therefore lacks a patentable utility.

Claim Rejections - 35 USC § 112

Enablement

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The instant claims were previously rejected for lack of enablement.

Applicants argue that the term “feed requirements” are known to one skilled in animal husbandry as being computed by using parameters and methods disclosed on p. 27 of the specification and p. 13 of the applicants’ answer. Applicants further argue that the art here is animal husbandry, and not bioinformatics. Applicants also argue that the specification enables for “taken into account” genotype and environmental considerations. Applicants state that “[m]easuring actual gain is something that one of less that ordinary skill in the art would know how to do (the skill required in one of your average 4-H. club member).” Applicants’ arguments have been considered, but are found not persuasive.

The instant invention is directed to a method, a system, and a computer readable medium, and therefore is properly classified as related to the field of bioinformatics, as set forth in the telephone interview, conducted 8/11/2005 and the Interview Summary, mailed 8/29/2005.

The examiner broadly and reasonably interprets the term “feed requirements” as comprising requirements calculated by using disclosed parameters (*see* p. 13 of the answer and p. 27 of the specification) and requirements for the meat/fat/milk/hide/progeny production, requirements to sustain a life cycle and tolerance to a particular climate, and/or requirements for obtaining or withstanding other factors. The instant specification does not provide specific guidance to practice the invention because it does not disclose how to predict feed requirements without knowing parameters for prediction and a desired goal. If applicants intend “feeding requirements” to be those disclosed on p. 27 of the specification, then applicants are invited to

state on the record that the disclosure on p. 27 is the definition of the term “feeding requirements” or alternatively recite the parameters of “feeding requirements” in the instant claims.

Applicants state that “genotype” is defined on p. 21 of the specification, as including breed type, body size, stage and rate of growth. “Including” indicates an open-ended group and the disclosure on p. 21 is not interpreted as the “definition” of “genotype.” If applicants intend to define “genotype” as being “breed type, body size, stage and rate of growth” (p. 7 of the specification), then it is noted that such limiting definition is not disclosed.

Applicants further state that environmental differences include variables such as outside temperature, internal and external insulation, wind, and hair coat depth and conditions as well as activity. (p. 14 of the answer). Similarly, “including” indicates an open-ended group and the disclosure on p. 8 is not interpreted as the “definition” of “environmental differences.” Further, the specification does not provide guidance of how to determine “differences” for a general environmental condition.

Applicants argue that “[o]ne of ordinary skill in the art, utilizing an extremely well-known model, the CNCPS, would know how to perform the calculations and include both genotype and environmental considerations.” (p. 14 of the answer). Applicants cite a passage from application 60/396,361 that shows how to “take into account” the effects of “breed type,” “previous nutrition,” “acclimatization, and “current environmental effects” (heat lost v. heat produced) (p. 15 of the answer). Applicants argue that this passage further provides “enablement of taking into account genotype and environmental considerations.” (p. 15 of the answer). However, the instant specification does not provide specific guidance to practice the invention

because it does not disclose how to “take into account” generic “genotype” and “environmental differences” when genotype and environmental differences are not even defined (*i.e.*, to take into account unknown parameters). The specification only enables for disclosed examples of “genotype” (*e.g.*, breed type) and “environmental” factors (*e.g.*, previous nutrition, acclimatization, and current environmental effects).

Applicants argue that although the example provides for input of animal information into a program, it is not the inventive contribution. As stated in the previous office action, the examples do require additional steps, and therefore do not provide guidance to practice the claimed invention, wherein the claims do not recite those steps.

For the reasons stated above and in the previous office action, the rejection of claims 1-27 under 35 U.S.C. 112, first paragraph, is maintained for lack of enablement.

New Matter

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

Applicants amended claims 1, 9, 16, and 22 to recite predicting a feed requirement “from characteristics for the individual animal … wherein said characteristics comprise: initial body weight, final body weight, fat characteristics, muscle characteristics, body characteristics.” However, characteristics comprising fat characteristics, muscle characteristics, body characteristics, do not have support in the specification, claims, or drawings, as originally filed.

Applicants pointed to paragraph 35 for support of the newly entered limitation (p. 10 of the answer). However, paragraph 35 recites entering animals' information (hip height and age, and ultrasound fat depth, rib eye area, and marbling, and body weight at the time of ultrasound) (p. 14). The specification further discloses on p. 4 computing feeding requirements considering breed type, body size, stage and rate of growth. The characteristics recited by the amended claims are broader than that recited in the original application, and therefore the amendment constitutes new matter.

Applicants further amended claims 1, 9, 16, and 22 to recite "predicting a daily weight gain ... from said daily feed requirement." Applicants did not point for support for the newly recited limitation. The specification discloses "obtaining the daily feed requirements for an individual animal based on actual BW, ADG [*i.e.*, daily gain] and carcass measurements." (p. 9). The specification also discloses "a feed intake model to predict daily gain, body weight, and feed required on a daily basis." (p. 12). The application, as originally filed, does not support predicting weight gain from feed requirement. Thus, the original disclosure does not support the new limitation, and therefore constitutes new matter.

Second Paragraph

Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-8 were previously rejected because the relationship between steps and the preamble was not clear. Applicants admit that the preamble merely states the intended use of the

invention and is not limiting the claims. In light of applicants' amendments and the definition, the rejection is withdrawn.

Claims 1, 9, and 22 were previously rejected because the preamble recites the limitation "feeding of cattle," but the method steps refer to "an individual animals." Applicants stated that they define "animals" being "feedlot steers or heifers, or herd replacement bulls or heifers." (p. 17 of the answer). In light of the applicants' definition, the rejection is withdrawn.

Claims 1, 9, 16, and 22 were previously rejected because the limitation "feed requirements" is not clear. As stated above, unless applicants intend to limit "feed requirements" to that disclosed in the specification (p. 27), this rejection is maintained.

Claims 1, 3, 4, 9-12, 16-19, and 22-25 were previously rejected because the limitation "environmental differences" is vague and indefinite. Applicants argue that the term is defined on p. 8 as including "variables such as outside temperature, internal and external insulation, wind, and hair coat depth and conditions as well as activity." (p. 17 of the answer). As set forth above, applicants do not specifically define the limitation on p. 8 of the specification, but only disclose examples of conditions. While a claim may be broad (*i.e.*, encompasses multiple environmental conditions), one skilled in the art must still be apprised of the metes and bounds what applicant intends to claim. For the reason stated above and in the previous office action, the rejection is maintained.

Claim 1, 3, 4, 9-12, 16-19, and 22-25 recite "genotype differences" and were previously rejected. Applicants argue that they define "genotype" in the specification (paragraph 24) including breed type, body size, stage and rate of growth (p. 17 of the answer). As set forth above, the disclosure on p. 7 is not interpreted as the definition. While a claim may be broad (*i.e.*,

encompasses multiple animal parameters), one skilled in the art must still be apprised of the metes and bounds of what applicant intends to claim. For the reason stated above and in the previous office action, the rejection is maintained.

Claims 7 and 26 recite “adjusting the predicted daily feed requirement until predicted daily gain substantially equals actual daily gain” and were previously rejected. Applicants argue that “actual gain,” is well understood in the art, and “one of less than ordinary skill in the art would know how to obtain the actual gain (a cowhand or a junior high school 4H club member would know how to obtain the actual gain.)” (p. 17 of the answer). This step recites an “actual” gain, and therefore may be interpreted as comprising a physical step of measuring an actual weight. However, neither of the method steps actually recites a step of obtaining actual weight. As it is not clear what limitation is intended, claims 7 and 26 are indefinite.

Claim 8 recites “individual animal characteristics” and was previously rejected. Claim 8 depends from claim 1 which, as amended, recites “wherein . . . characteristics comprise: initial body weight, final body weight, fat characteristics, muscle characteristics, body characteristics.” Further, applicants argue that animal characteristics are disclosed in the specification to include hot carcass weight QG, LMA, initial and final body weight, hip height and age, and ultrasound fat depth, rib eye area, marbling, and body weight. (p. 18 of the answer). It is not clear whether characteristics recited in claim 8 are the same or different than the characteristics recited in claim 1 and/or the specification. While claims are interpreted in light of the specification, specific embodiments disclosed in the specification are not read into claims. As it is not clear what limitation is intended, claim 8 is indefinite.

Claims 1, 3, 4, and 8 recite “taking into account” and were previously rejected.

Applicants argue that “taking into account” has its plain and usual meaning of “taking into consideration” or “including the effects of.” Applicants also argue on p. 14-15 of the answer, that the instant application and application 60/396,361 provide for specific examples of “taking into account.” While claims are interpreted in light of the specification, specific embodiments disclosed in the specification are not read into claims. It is not clear what limitation is intended by “taking into account,” *e.g.*, using a specific algorithm, specific criteria, or specific combination of factors/characteristics. Therefore, claims 1-8 are indefinite.

Claims 4, 12, 19, and 25 recite “performance information” and were previously rejected. Applicants argue that claims 4, 12, 19, and 25 “define” “performance information” “information comprising feed intake and feed efficiency.” (p. 18 of the answer). Claims 4, 12, 19, and 25 do not specifically define the limitation, but provide examples of “performance information” because the claims recite an open-ended group (*i.e.*, comprise). As neither the claims nor the specification define this limitation, claims 4, 12, 19, and 25 are indefinite.

Claim 22, as amended, is interpreted to be a computer-readable medium comprising a program, which is statutory subject matter. However, the intended limitations of the program are not clear. Claim 22 recites limitations which not clearly limitations of the medium or a program (*e.g.*, provision of a daily feed requirement). Further, the preamble is directed to a “system,” but the actual claim limitations only recite “means” and a computer-readable medium comprising a code. It is not clear whether applicant intends a computer system comprising a computer-readable medium or intends only to claim the medium itself. As the intended limitation is not clear, claims 22-27 are indefinite.

Claim Rejections - 35 USC § 102

Claims 1, 3-14, 16, 18-22, and 24-27 are rejected under 35 U.S.C. 102(a) as being anticipated by Fox, Presentation at the 33d BIF Conference, July 11-14 (2001).

The instant claims were previously rejected over Fox under 35 U.S.C. 102(b). Applicants submitted a Declaration under 37 CFR 1.132 by Danny G. Fox asserting that this publication was presented by Mr. Fox, the written copy of the presentation was published at least two weeks after the conference, and no handouts were provided at the conference. In view of the declaration, the rejection of claims 1, 3-14, 16, 18-22, and 24-27 under 35 U.S.C. 102(b) is hereby withdrawn. However, the publication itself still qualifies as prior art under 35 U.S.C. 102(a).

Applicants argue that Fox does not disclose a table equivalent to Table 3 of the instant application, and therefore does not disclose or enable all the limitations of the instant disclosure. (p. 19 of the answer). Applicants' arguments have been considered, but are found not persuasive.

The examiner notes that information disclosed in Table 3 of the instant application is not a limitation recited in the instant claims. Fox discloses a computer-based method for managing feeding cattle comprising steps of predicting feed requirements of an individual animal and a daily weight gain using a model and taking into account genotype, diet, and environmental differences (p. 3-5 and 7-8), as set forth in the previous office action, and therefore anticipates claims 1, 3-14, 16, 18-22, and 24-27 under 35 U.S.C. 102(a).

Claim Rejections - 35 USC § 103

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fox, Presentation at the 33d BIF Conference, July 11-14 (2001), as applied to claim 1, 3-14, 16, 18-22, and 24-27 above, in view of Tedeschi, *J. Dairy Sci.*, 83:2139-2148 (Sept. 2000).

Claim 2 was previously rejected over Fox, in view of Tedeschi.

Applicants argue that Fox does not anticipate claims 1, 3-14, 16, 18-22, and 24-27.

Applicants also argue that Tedeschi does not teach predicting a daily feed requirement and a daily weight gain.

Fox discloses a method for managing feeding of cattle similar to the instant method, as set forth above.

Tedeschi teaches optimization for the predicted target weight. The optimization comprises iterative steps of optimizing the diet (feed requirements) and animal response (weight gain) (see fig. 1 and p. 2140-2142). For the reasons stated above and in the previous office action, the rejection of claim 2 is maintained.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final

action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Miller whose telephone number is (571)272-6101. The examiner can normally be reached on 8-5, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, Ph. D. can be reached on (571)272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**MARJORIE A. MORAN
PRIMARY EXAMINER**

Marina Miller
Examiner
Art Unit 1631

MM

Marjorie A. Moran
12/15/05